

**THE  
DOE RUN  
COMPANY**

Remediation Group

**Mark Nations**  
**Mining Properties Manager**  
**mnations@doerun.com**

December 11, 2013

Mr. Jason Gunter  
Remedial Project Manager  
U.S. Environmental Protection Agency  
Region 7 - Superfund Branch  
11201 Renner Blvd.  
Lenexa, KS 66219

**Re: National Mine Tailings Site Progress Report**

Dear Mr. Gunter:

As required by Article VI, Section 51 of the Unilateral Administrative Order (Docket No.CERCLA-07-2006-0231) for the referenced project and on behalf of The Doe Run Company and NL Industries, Inc., the progress report for the period November 1, 2013 through November 30, 2013 is enclosed. If you have any questions or comments, please call me 573-518-0800.

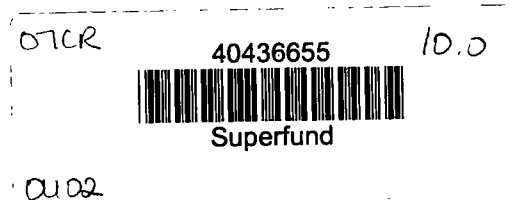
Sincerely,



Mark Nations  
Mining Properties Manager

Enclosure

c: Jason England – TDRC  
Mark Yingling – TDRC (electronic only)  
Matt Wohl – TDRC (electronic only)  
Kevin Lombardozi – NL Industries, Inc.  
Matt Whitwell – City of Park Hills  
Norm Lucas – Park Hills – Leadington Chamber of Commerce  
Robert Hinkson – MDNR  
Ty Morris – Barr Engineering



**National Mine Tailings Site**  
Park Hills, Missouri  
**Removal Action - Monthly Progress Report**  
Period: November 1, 2013 – November 30, 2013

**1. Actions Performed and Problems Encountered This Period:**

- a. Work continued on the development of the Removal Action Report.

**2. Analytical Data and Results Received This Period:**

- a. During this period, water samples were collected at the sampling locations identified in Appendix C of the Removal Action Work Plan where water was present. Copies of the analytical results from the last sampling event are included with this progress report.
- b. During this period, the Ambient Air Monitoring Report for August 2013 was completed. Any issues identified in this report are discussed below. A copy of this document has been sent to your attention.

The August 2013 Ambient Air Monitoring Report noted the following:

- The action levels for lead and dust were not exceeded.
- No sample was taken on the National #1 (Ozark Insulation) TSP monitor on 08/8/13 due to the run time of the monitor being outside of the acceptable limits. This issue has been addressed.
- No sample was taken with the National #3 (Water Plant) TSP monitor on 08/20/13 due to a mechanical failure. Upon discovery of this issue, the issue was corrected.
- No sample was taken on the National #2 (Soccer Field) TSP monitor on 08/22/13 due to the run time of the monitor being outside of the acceptable limits. This issue has been addressed.
- No sample was taken on the National #1 (Ozark Insulation) TSP monitor on 08/29/13 due to the run time of the monitor being outside of the acceptable limits. This issue has been addressed.

**3. Developments Anticipated and Work Scheduled for Next Period:**

- a. Continue developing the Removal Action Report.
- b. Complete monthly water sampling activities as described in the Removal Action Work Plan.
- c. Complete air monitoring activities as described in the Removal Action Work Plan.

**4. Changes in Personnel:**

- a. None.

**5. Issues or Problems Arising This Period:**

- a. None.

**6. Resolution of Issues or Problems Arising This Period:**

- a. None.



Pace Analytical Services, Inc.  
9608 Loiret Blvd  
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(913)599-5665

November 21, 2013

Amy Sanders  
The Doe Run Company  
P. O. Box 500  
Viburnum, MO 65566

RE: Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

Dear Amy Sanders:

Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jamie Church

jamie.church@pacelabs.com  
Project Manager

Enclosures



#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 13-012-0  
Illinois Certification #: 003097  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-13-4  
Utah Certification #: KS000212013-3  
Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60157552001	11114/NAT NE	Water	11/12/13 12:00	11/14/13 08:15

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### SAMPLE ANALYTE COUNT

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60157552001	11114/NAT NE	EPA 200.7	TDS	6	PASI-K
		EPA 200.7	TDS	3	PASI-K
		SM 2540C	RAH	1	PASI-K
		SM 2540D	RAH	1	PASI-K
		SM 2540F	RAH	1	PASI-K
		SM 4500-H+B	JMC1	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		SM 5310C	JMC1	1	PASI-K

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## ANALYTICAL RESULTS

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

Sample: 11114/NAT NE Lab ID: 60157552001 Collected: 11/12/13 12:00 Received: 11/14/13 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Cadmium	ND	ug/L	5.0	2.5	1	11/15/13 14:00	11/19/13 11:03	7440-43-9	
Calcium	92500	ug/L	100	10.4	1	11/15/13 14:00	11/19/13 11:03	7440-70-2	
Lead	7.2	ug/L	5.0	2.4	1	11/15/13 14:00	11/19/13 11:03	7439-92-1	
Magnesium	55400	ug/L	50.0	6.5	1	11/15/13 14:00	11/19/13 11:03	7439-95-4	
Total Hardness by 2340B	459000	ug/L	500		1	11/15/13 14:00	11/19/13 11:03		
Zinc	128	ug/L	50.0	3.3	1	11/15/13 14:00	11/19/13 11:03	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Cadmium, Dissolved	ND	ug/L	5.0	2.5	1	11/19/13 17:00	11/20/13 14:16	7440-43-9	
Lead, Dissolved	4.2J	ug/L	5.0	2.4	1	11/19/13 17:00	11/20/13 14:16	7439-92-1	
Zinc, Dissolved	100	ug/L	50.0	3.3	1	11/19/13 17:00	11/20/13 14:16	7440-66-6	
<b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C									
Total Dissolved Solids	597	mg/L	5.0	5.0	1		11/18/13 13:05		
<b>2540D Total Suspended Solids</b> Analytical Method: SM 2540D									
Total Suspended Solids	ND	mg/L	5.0	5.0	1		11/15/13 10:30		
<b>2540F Total Settleable Solids</b> Analytical Method: SM 2540F									
Total Settleable Solids	ND	mL/L/hr	0.20	0.20	1		11/14/13 09:00		
<b>4500H+ pH, Electrometric</b> Analytical Method: SM 4500-H+B									
pH at 25 Degrees C	8.3	Std. Units	0.10	0.10	1		11/17/13 08:00		H6
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Sulfate	207	mg/L	20.0	3.2	20		11/17/13 09:45	14808-79-8	
<b>5310C TOC</b> Analytical Method: SM 5310C									
Total Organic Carbon	0.97J	mg/L	1.0	0.50	1		11/16/13 15:09	7440-44-0	

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### QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

QC Batch: MPRP/25154 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60157552001

METHOD BLANK: 1290119 Matrix: Water  
Associated Lab Samples: 60157552001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	ND	5.0	11/19/13 10:35	
Calcium	ug/L	ND	100	11/19/13 10:35	
Lead	ug/L	ND	5.0	11/19/13 10:35	
Magnesium	ug/L	ND	50.0	11/19/13 10:35	
Total Hardness by 2340B	ug/L	ND	500	11/19/13 10:35	
Zinc	ug/L	ND	50.0	11/19/13 10:35	

LABORATORY CONTROL SAMPLE: 1290120

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	1000	1010	101	85-115	
Calcium	ug/L	10000	9560	96	85-115	
Lead	ug/L	1000	1020	102	85-115	
Magnesium	ug/L	10000	9950	99	85-115	
Total Hardness by 2340B	ug/L		64800			
Zinc	ug/L	1000	999	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1290121 1290122

Parameter	Units	60157550001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	1030	1060	103	106	70-130	3	10	
Calcium	ug/L	102000	10000	10000	105000	106000	21	37	70-130	2	9 M1	
Lead	ug/L	6.1	1000	1000	1010	1050	101	104	70-130	3	10	
Magnesium	ug/L	45100	10000	10000	51900	53400	68	84	70-130	3	9 M1	
Total Hardness by 2340B	ug/L	441000			475000	485000				2		
Zinc	ug/L	2800	1000	1000	3570	3730	76	93	70-130	4	11	

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### QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

QC Batch: MPRP/25207 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60157552001

METHOD BLANK: 1292227 Matrix: Water  
Associated Lab Samples: 60157552001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	ND	5.0	11/20/13 14:02	
Lead, Dissolved	ug/L	ND	5.0	11/20/13 14:02	
Zinc, Dissolved	ug/L	ND	50.0	11/20/13 14:02	

LABORATORY CONTROL SAMPLE: 1292228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	1000	969	97	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Zinc, Dissolved	ug/L	1000	949	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1292229 1292230

Parameter	Units	60157800001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium, Dissolved	ug/L	ND	5000	5000	5000	4960	100	99	70-130	1	10	
Lead, Dissolved	ug/L	80.0	5000	5000	4550	4530	89	89	70-130	0	10	
Zinc, Dissolved	ug/L	9970	5000	5000	13600	12700	74	55	70-130	7	11 M1	

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### QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

QC Batch: WET/44623      Analysis Method: SM 2540C  
QC Batch Method: SM 2540C      Analysis Description: 2540C Total Dissolved Solids  
Associated Lab Samples: 60157552001

METHOD BLANK: 1291528      Matrix: Water  
Associated Lab Samples: 60157552001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	11/18/13 13:04	

LABORATORY CONTROL SAMPLE: 1291529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	994	99	80-120	

SAMPLE DUPLICATE: 1291530

Parameter	Units	60157453004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	265000	265000	0	17	

SAMPLE DUPLICATE: 1291531

Parameter	Units	60157586004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		17	

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### QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

QC Batch:	WET/44584	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60157552001		

METHOD BLANK: 1289940      Matrix: Water  
Associated Lab Samples: 60157552001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	11/15/13 10:27	

SAMPLE DUPLICATE: 1289941

Parameter	Units	60157554001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 1289942

Parameter	Units	60157499011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.0	15.0	12	25	

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### QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

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QC Batch:	WET/44613	Analysis Method:	SM 4500-H+B
QC Batch Method:	SM 4500-H+B	Analysis Description:	4500H+B pH
Associated Lab Samples:	60157552001		

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SAMPLE DUPLICATE: 1291339

Parameter	Units	60157191001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	10.1	10.1	0	5	H6

### REPORT OF LABORATORY ANALYSIS

Date: 11/21/2013 08:31 AM

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### QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

QC Batch: WETA/27130 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 60157552001

METHOD BLANK: 1290262 Matrix: Water  
Associated Lab Samples: 60157552001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	11/17/13 09:00	

LABORATORY CONTROL SAMPLE: 1290263

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1290264 1290265

Parameter	Units	60157453001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Sulfate	mg/L	479	250	250	737	854	103	150	80-120	15	M1

MATRIX SPIKE SAMPLE: 1290266

Parameter	Units	60157453002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	324	250	579	102	80-120	

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### QUALITY CONTROL DATA

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

QC Batch: WETA/27134 Analysis Method: SM 5310C  
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon  
Associated Lab Samples: 60157552001

METHOD BLANK: 1290930 Matrix: Water  
Associated Lab Samples: 60157552001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	11/16/13 10:56	

LABORATORY CONTROL SAMPLE: 1290931

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.5	110	80-120	

MATRIX SPIKE SAMPLE: 1290932

Parameter	Units	60157449001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.3	5	6.1	77	80-120	M1

SAMPLE DUPLICATE: 1290934

Parameter	Units	60157449002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	2.4	2.4	2	25	

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## QUALIFIERS

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.  
ND - Not Detected at or above adjusted reporting limit.  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PRL - Pace Reporting Limit.  
RL - Reporting Limit.  
S - Surrogate  
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-K Pace Analytical Services - Kansas City

### ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.  
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NATIONAL UAO (NATIONAL)  
Pace Project No.: 60157552

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60157552001	11114/NAT NE	EPA 200.7	MPRP/25154	EPA 200.7	ICP/19424
60157552001	11114/NAT NE	EPA 200.7	MPRP/25207	EPA 200.7	ICP/19449
60157552001	11114/NAT NE	SM 2540C	WET/44623		
60157552001	11114/NAT NE	SM 2540D	WET/44584		
60157552001	11114/NAT NE	SM 2540F	WET/44523		
60157552001	11114/NAT NE	SM 4500-H+B	WET/44613		
60157552001	11114/NAT NE	EPA 300.0	WETA/27130		
60157552001	11114/NAT NE	SM 5310C	WETA/27134		

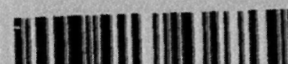
### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60157552



60157552

Client Name: Doc Run

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 797146195330 Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other Ziploc

Thermometer Used: T-23 / T-194

Type of Ice: Wet Blue None ☐ Samples received on ice, cooling process has begun.  
(circle one)

Cooler Temperature: 1.2

Date and initials of person examining contents: 2/1/14

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>Se H Sol</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

## Section A

Required Client Information:

Company: **The Doe Run Company**  
 Address: **PO Box 500**  
 Email To: **asanders@doerun.com**  
 Phone: (573) 689-4535 Fax: (573) 244-8179  
 Requested Due Date/TAT: **5 To 7 Days**

## Section B

Required Project Information:

Report To: **Amy Sanders**  
 Copy To:  
 Purchase Order No.:  
 Project Name: **National UAO (National)**  
 Project Number:

## Section C

Invoice Information:

Attention: **Amy Sanders**  
 Company Name: **The Doe Run Company**  
 Address: **PO Box 500, Viburnum, MO 65556**  
 PACE Quote Reference:  
 PACE Project Manager:  
 PACE Profile #:

**REGULATORY AGENCY**  
☐ NPDES ☐ GROUND WATER  
☐ UST ☐ RCRA  
**Site Location**  
 STATE: **MO**

Page: **1** of **1**  
 COCH: **221**

Section C Required Sample Information		Valid Matrix Codes		COLLECTED DATE/TIME		Bottles / Preservatives		Requested Analysis Filtered (Y/N)																SEMO Lab Project No / Lab ID								
ITEM #	SAMPLE ID (A-Z, 0-9 / .) Sample IDs MUST BE UNIQUE	MATRIX WATER WASTE WATER SOL/SOLID	CODE WT WW SL	DATE (mm/dd/yy)	TIME (Military)	DATE (mm/dd/yy)	TIME (Military)	250 mL Unpreserved	500 mL Unpreserved	1 L Unpreserved	250 mL Nitric	250 mL Amber Glass H <sub>2</sub> SO <sub>4</sub>	250 mL Plastic H <sub>2</sub> SO <sub>4</sub>	1000 mL Amber HCL	250 mL ZnAc/NaOH	500 mL Amber Glass H <sub>2</sub> SO <sub>4</sub>	*See Additional Comments Below  ↓ Analysis Test ↓															
1	11114 <b>B01U, B02U, B03N, A63S</b>	WW	G			11/12/13	1200	4	1	1	1	1						CD-D, PB-D, ZN-D, HARD, PH, SO <sub>4</sub> , SS, TDS, TOC, TSS	Nat NE													
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ADDITIONAL COMMENTS

\*200.7 Total Recoverable and Dissolved Metals

RELINQUISHED BY / AFFILIATION

**LARRY HOPKINS** **Sample** **4/13/13** **1100**

DATE

**4/13/13**

ACCEPTED BY / AFFILIATION

**Michelle MCG** **PAZI**

DATE

**4/14**

TIME

**8:15**

SAMPLE CONDITIONS

**1.2** **Y** **U**

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

**Larry Hopkins**

SIGNATURE of SAMPLER:

*Larry Hopkins*

DATE signed

(MM/DD/YYYY):

**4/13/13**

Temp in °C

pH in SU

Received on

by (Y/N)

Custody Sealed

Cooler (Y/N)